

***Zea mays* L. hybrids kernels evaluated by image analysis tools**

Janka Nozkova, Eniko Kasa

References

- DE CARVALHO, M. L. M., VAN AELST, A. C., VAN ECK, J. W., HOEKSTRA, F. A. (1999) Pre-harvest stress cracks in maize (*Zea mays* L.) kernels as characterized by visual, X-ray and low temperature scanning electron microscopical analysis: effect on kernel quality. *Seed Science Research*, vol. 9, pp. 227–236.
- DELL'AQUILA, A. (2006) Computerised seed imaging: a new tool to evaluate germination quality. *Communications in Biometry and Crop Science*, vol. 1, no. 1, pp. 20-31.
- ERASMUS, C. (2003) *Maize kernel translucency measurement by Image Analysis and its relationship to vitreousness and dry milling performance*. PhD thesis. Pretoria: University of Pretoria.
- FOX, G. and MANLEY, M. (2009) Hardness methods for testing maize kernels. *Journal of Agricultural and Food Chemistry*, vol. 57, no. 13, pp. 5647–5657. doi: <https://doi.org/10.1021/jf900623w>
- GLASBEY, C. A. and HORGAN, G. W. (2001) Image analysis in agriculture research. *Quantitative Approaches in System Analysis*, special issue, vol. 23, pp. 43-54.
- GUELPA, A., DU PLEISIS, A., KIDD, M., MANLEY, M. (2015) Non-destructive estimation of maize (*Zea mays* L.) kernel hardness by means of an X-ray micro-computed tomography (μ CT) density calibration. *Food and Bioprocess Technology*, vol. 8, no. 6, pp. 1419-1429.
- JANDA, J. and MICHALEC, V. (1982) *Mayze*. Bratislava: Píroda. 408 p.
- MUTTERER, J. and ZINCK, E. (2013) Quick-and-clean article figures with FigureJ. *Journal of Microscopy*, vol. 252, pp. 89-91. doi: <https://doi.org/10.1111/jmi.12069>
- ROBUTTI, J. L., HOSENEY, R. C. and WASSOM, C. E. (1974). Modified opaque-2 corn endosperms. II. Structure viewed with a scanning electron microscope. *American Association of Cereal Chemists*, vol. 51, pp. 173-180.
- RODRÍGUEZ-PULIDO, F. J. et al. (2012) Ripeness estimation of grape berries and seeds by image analysis. *Computers and Electronics in Agriculture*, vol. 82, pp. 128-133.
- SCHINDELIN, J., RUEDEN, C. T., HINER, M. C., ELICEIRI, K. W. (2015) The ImageJ ecosystem: An open platform for biomedical image analysis. In *Mol. Reprod. Dev.*, vol. 82, pp. 518–529. doi: <https://doi.org/10.1002/mrd.22489>
- BLASCHKE, T. et al. (2014) Geographic Object-Based Image Analysis – Towards a new paradigm, *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 87, pp. 180-191. <https://doi.org/10.1016/j.isprsjprs.2013.09.014>
- UCHIDA, S. (2013) Image processing and recognition for biological images. *Development, growth and differentiation*, vol. 55, pp. 523-549. doi: <https://doi.org/10.1111/dgd.12054>
- WATSON, S. A. (1987) Structure and composition. In WATSON, S. A. and RAMSTAD, P. E. (Eds.). *Corn chemistry and technology*. St. Paul: American Association of Cereal Chemists.
- WIWART M. et al. (2012) Identification of hybrids of spelt and wheat and their parental forms using shape and color descriptors. *Computers and Electronics in Agriculture*, vol. 83, pp. 68–76. <https://doi.org/10.1016/j.compag.2012.01.015>